

JUNE 1982

---

# TRS-80<sup>TM</sup> NEWSLETTER

---

SOUTH BAY - USERS GROUP

## Page - Contents

1. Notes On Libraries
2. News Flash! Direct File Transfer Is On SBUG-80
3. SBUG Software/Hardware Review
5. Bits and Bytes
6. The DTC 381 Printer
9. Find Your Program
12. Notice To Amateur Radio Operators
13. Letter To Apparat Concerning Winchester Hard Disc



SBUG-80 NEEDS YOU

# South Bay TRS-80 Users Group

SBUG meetings are held the 3rd Tuesday of each month in the north east corner of Dyens' building at:

Time - 7:15 to 10:30 PM  
5481 Petrick Henry Drive  
Santa Clara, Ca

June 15, July 20, August 17

- Features: 1) Phil Coffman has arranged Art Pruzynski, from the Radio Shack Computer Center, to tell us about R.S. and our machines.  
2) Banner contest results.  
3) Open Rep session.

\*\*\*\* Your Steering Committee follows \*\*\*\*

Discussion Leaders:	SBUG-80 Username	Phone
Phil Coffman	(CAP)	(408) 997-8247
Mike McHenry	(MCHENRY)	(408) 245-4704
Gerry McKee	(GMCKEE)	(408) 926-4063
Sabri Kawesh	(SABRI)	(408) 732-5484
Bill Richerson	(OPTOBILL)	(488) 257-8267
Treasurer:		
Larry Gunderson	(TREAS)	(408) 259-5349
Newsletter Editor:		
Robert Byrd	(EDITOR)	(408) 732-6775
Librarians:		
(disc)	Pete Hnntsinger (PETE)	(408) 227-7125
(tape)	Bob Brown (SAMBROWN)	(408) 379-2774
(doc)	Ron Carpenter (RON)	(415) 726-3487

If the need arises feel free to give one of us a call.

Send Newsletter articles to:

Editor, South Bay TRS-80 User Group  
Robert Byrd  
P.O. Box 60116  
Sunnyvale, Ca 94088

Deadlines for the July newsletter is: 5 July 82.

If at all possible send articles via modem or saved on disc/tape. I will see that your disc or tape is returned to you. Thanks . . .

## NOTES ON LIBRARIES

Many of you have been asking about the libraries and are wondering if we are going to have any. Well, whether or not SBUG has a decent library is up to YOU! Last meeting I proposed that each of us come to the next meeting, June, with something to contribute. I hope each of you have looked through your software collection and picked out something that you believe some other member might like to review. What do I bring? If it is copyrighted contributions MUST include the original documentation. Your steering committee has come to the conclusion, due to the way that the copyright laws are

JUNE 82

written, that our library must only contain original documentation. Hey let's face it, would you donate a xeroxed copy of your favorite novel to the public library? We must not also forget that many programs are public domain.

I have seen many excellent programs that the author has contributed from the goodness of his heart and the spirit of teamwork. One very good example is Courtney Krehbiel from PEGGYTRONICS, one of our members, who has donated an excellent program, MAXIPRINT, that utilizes the MX-86 and your wordprocessor with some amazing capabilities. This program is mainly for review and if you like it the price is certainly fair.

Please bring all programs that have been checked out of the libraries back so that our librarians can take inventory. We presently have almost 288 active members. What a nice library we would have if each of you brought just one good program to contribute. I don't know about you, but I'm going to bring two.

Robert Byrd  
EDITOR @ SBUG-88

\*\*\*\*\*  
\*\*\*\*\*  
**START GETTING YOUR GOODS TOGETHER, OUR SWAP MEET IS PLANNED FOR THE NEXT CLUB MEETING. LOOK FOR DETAILS IN THE NEXT NEWSLETTER.**  
\*\*\*\*\*

**NEWS FLASH!! DIRECT FILE TRANSFER IS ON SBUG-88**

I have found that disk files can be successfully transferred to and from SBUG-88 using the MODEM 88 program from The Alternete Source (704 M. Pennsylvania Avenue, Lansing Michigan 48906, costs \$39.95 plus \$3.00 shipping). The transfer can be done by using the DFT/CMD file that is on SBUG-88 and MODEM88/CMD on your computer. The procedure to send a file is as follows:

From the terminal mode of MODEM88 type to the SBUG-88 DOB level "DFT R filename:1". Then wait for the "Ready to send" message and then get to the MODEM88 menu by keying 'BREAK' and selecting option 'S'. You will then be asked to type in the filename and press 'ENTER'. After the transfer is complete you will be back in the SBUG-88 command mode. Do a 'DIR 1' and see if it is in the directory -- it really works well!

To receive a file from SBUG-88 simply substitute "DFT S filename" and select the 'R' option from the MODEM88 menu and proceed as described above. I believe that this procedure should also work with derivatives of the CP/M MODEM program. Let's exchange some of the programs you guys are developing out there. I have put a file called DIR/TXT on SBUG-88 that will be in the newsletter. It is a BASIC program to read the directory.

Mike McHenry  
MCHENRY @ SBUG-88

**South Bay TRS-80 Users Group**

```

*****
*****      SBOG  Software/Hardware      *****
*****      Review      *****
*****

```

This Column is now dedicated to reviews of software and hardware currently available on the market for the Modal I,II,III & 16 TRS-80. If you have a favorite/loved program/peripheral that you feel you want everybody to know about, write it down, explaining how it works and why you like/dislike it, and send it to the editor of this news- letter (he'll appreciate it!).

>>>>>>>>>>>>>>>>>> Software <<<<<<<<<<<<<<<<<<<

Sky Warrior  
Adventura International  
Box 3435, Longwood FL 32750

Sky Warrior is a new arcade game by the people who brought you the Scott Adams Adventures. This is a new realm of programming for AI, their Adventures(1-12) are EXTREMELY successful as they well should be. However, the adventures are hardly what one would call an arcade game, they are more like a word or thinking game. So as far as arcade games go, Adventure International (AI) is inexperienced.

This is exactly the idea one gets when Sky Warrior is initialized. The "Banner" is boring, if you can even call it a Banner, all it does is display the title in graphics (SKY WARRIOR), the current high score (usually 0000) and a very simple "wobble" sound effect. That type of boring programming went out with the introduction of the Big Five arcade games, which dazzles the eye with highly imaginative Banners. AI should take lessons from Big Five.

After the banner's sound effect is over with, you are left to figure out what key to push to get on with the game. After some experimenting, the author finally discovered the answer: <spacebar> for instructions, <1> or <2> for 1 or 2 players. Pressing the spacebar will give you a somewhat ordinary display of the commands:

<UP arrow> for up

<LEFT arrow>for slow                      <RIGHT arrow>for fast

<DOWN arrow> for down

<SPACEBAR> to fire

Pressing the <CLEAR> key will clear the high score, hitting the <BREAK> key will return you to Level II basic (I dont know why it goes to Level II basic). To start the game enter <1> or <2> for the amount of players to play. Authors note: there is an extremely long wait between players, when in the 2 player mode.

The game is played by firing at the assorted targets beneath you while moving across a horizontally moving landscape-type maze of mountains and stalactites. The targets consist of:

- Rockets, which zoom up at you (destroy them before they destroy you!)
- Fuel cells, when hit, recharge your ever decreasing

fuel supply.

- Curious looking objects, I have yet to apprehend. The graphics in this game are not very good. The scrolling of the screen, for instance, is abrupt and broken, not smooth like most arcade games nowadays. The same goes for the gunship movement (up, down, slow and fast). Speaking of the gunship this is how it is represented on the screen:

--->>

(with bombs represented by the down arrow)

In fact the whole game is like this, as far as graphics go, allow moving simple graphics. You are given 3 gunships, an extra one every 10,000 points. Watch out, -5 every unused shot. After you have destroyed what seems like a plethora of enemy rockets, it shifts to a newer and harder "level". The levels become harder and harder with different landscapes in each. So far I have discovered 3 different levels, but I'm sure if there are more. The game keeps going until you have lost 3 ships, then the game ends. If you want to play again you have to start at level 1. This game can be tedious and a bit aggravating at times. However, perhaps the author of Sky Warrior decided to take a different approach to arcade games. Instead of dazzling the eyes with incredible graphics while holding the mind with dull play, he decided to write a game involving extreme skill which wouldn't bore the player after just 3 tries. A game where you couldn't possibly kill all the zombies in the first 5 minutes of play, leaving nothing left for conquest. This, of course, is exactly what Sky Warrior is: a Skill Game NOT an arcade game! I'm not saying that this is an excuse for bad graphics, there IS no excuse for bad graphics. Sky Warrior is a good game, BUT it could be a lot better if it had decent graphics.

So if you're looking for a great skill game that takes practice in order to enjoy then this is your game. If you're looking for a dazzling graphics arcade game then chances are Sky Warrior isn't your cup of soup.

\*\*\*\*\* R A T I N G (scale of 0 to 5) \*\*\*\*\*

- 0 = the pits
- 1 = poor
- 2 = slow
- 3 = ok
- 4 = good
- 5 = nose bleeds!

I give Sky Warrior a -- 4 --  
for over-all enjoyment

Graphics could be better, Banner is Terrible!  
Basically a SKILL game.

\*\*\*\*\*

Remember, this column is open for you to contribute to, so start writing!

-- Next month MDX-4 Modem kit review --

Dave Fox  
DAVEFOX @ SBUG-80

### **BITS AND BYTES**

The North End of SBUG had an interesting evening at the Northern Cal Federal meeting room on the 25th of May. Only a few of us were there probably because of my lack of reminders and notifications. Mike McSweeney brought his computer and it was rather enjoyable to be able to sit around the computer in a small group and try the problems again. Frank Veralager brought us a new one on VISICALC. It seems he was trying to get a "year-to-date" accumulator by entering monthly data into column A1 with the formula  $+A1+B1$  for column B1. It all works fine first time through, but if you store the input and then retrieve it an error appears in column B1. I suspect that this program only stores entered data so when it goes to recompute B1, all of the entered and previously accumulated data from A1 had gone away.

I recently got a 40 track double sided TANDON drive which I have successfully put on line with a single directory using either NEWDOS86 V2 or LDOS. With NEWDOS86 it seems to have problems if you try to use DDSD. I have had no problems formatting double density using plain jana disks even with the toughest formats. Incidentally, I recall that the power connectors for disk drives were in short supply a while back. I found a whole boxful at SALTED for 15 cents each for the body and 18 pins for 45 cents. It's a good time to stock up.

The Northern Cal room in Los Altos is reserved for June 25th for a byte bust of the North Side of SBUG. There is room for about 30 people comfortably. There will be no presentations, dissertations, or lectures. Saving a computer or two lives things up and it helps to have a problem or two in your pocket.

The printer driver program for setting up the EPSON by Len Wehh in the last NEWSLETTER will do the job for my DTC-381. It will take some modifications because of the larger number of commands that I need but it will do the job nicely. Thanks Len.

Tom Anderson  
ANDERSON @ SBUG-80

-----

JUNE 82

### THE DTC 381 PRINTER

While touring the COMPUTER FAIRE I chanced upon the DTC booth where they were demonstrating the DTC 381 printer. From that moment on I knew that I had to have one. This article is about that gem.

I had a DTC 308 and liked it very much. I also liked the DIABLO EYTYPE I mechanism because it is quieter than the EYTYPE II. The feature of the 381 that attracted me most was the price (\$995 at the FAIRE and at the SWAPMEET) coupled with bidirectional printing and a big list of commands for control of format and other elements of the output. It also takes directly over spaces so that little time is wasted chugging along printing spaces. It appears that they have raised the effective print speed of the HYTYPE I to about 50 cps compared to what it was with the DTC 308.

As with most of the dot matrix printers now on the market this letter quality printer will take format commands in text (if your port doesn't have a filter in it) that set page size, lines per page, characters per line, shadow print, overstrike, underline, and many others.

Another feature that appealed to me was the 16K buffer that comes at \$150 extra. But for me it was worth it. I can now dump 16K of program or text to the printer and go about something else. The dump takes about 15 seconds.

As you have probably guessed by this time I am in love with the machine and recommend it highly.

Tom Anderson  
ANDERSON @ SEUG-80

### IN REARCH OF THE DIRECTORY

I have been trying to write an improved directory catalog program, such as DIRPROG (Jack Egbert, 80 Micro October 1981), that does not limit the directory to one screen of input. All of the programs that I have use the CMD"DIR" command from Basic and then PEEK the program names into strings from the screen memory or point a string to the appropriate screen memory location. This works well until you have more files on the disk than can be displayed on the screen at once. With double density drives you soon find that many disks will have more than one screen of program names and the program will hang until you press enter to get a new screen of data. Unfortunately, the programs on the first screen are lost and the ones on the second screen are not in the proper locations.

To resolve this problem I decided to read the directory directly from the DIR/SYS file on the disk. The first thing I tried was to access the directory as a random access file. This does not work, however, since DOS comes back with an ATTEMPTED TO READ SYSTEM DATA RECORD error (error code 6). It does work if DIR/SYS is copied to another file and the read protection is removed using the SUPERZAP 'SCOPY' function.

The next thing I tried was to use the DIRECTRD program given in 80

## South Bay TRS-80 Users Group

Microcomputing (April 1982, page 216). This program uses a USR function to call a small machine language program to load the 280 registers. HL is loaded with the address of a 256 byte buffer area, B is loaded with the logical record length (0 for 256 bytes), and the C, D, and E registers are loaded with the values for the Drive, Track, and Sector numbers, respectively. The machine language then calls the DOS routine to read a sector (46DDH for TRS-DOS and 460DH for NEWDOS+). I could not find a similar DOS routine for NEWDOS80 V.2, which is my primary DOS. Also this program requires that you know the starting sector for the directory.

The same article gives a program (DISKRD3) which will read sectors from a disk file much like the Basic GET command. This allows DIR/SYS to be opened and the sectors read into a buffer. Pointing a string variable at the buffer location allows string manipulations of the directory information from Basic. The resulting program that I have written is a cross between the two 80-Micro programs with a few additions to speed up the operation and the addition of returning the DOS error codes from the USR call.

The listing of my program (RDDIRSYS/BAS) is given below. This program is specifically written for NEWDOS80 V.2, but it will work on any DOS if the following changes are made. The program assigns a 256 byte buffer in the third Basic disk file buffer location (6945H for NEWDOS80 V.2, three buffers are assigned by default when entering Basic). This address is defined by M1 and M2 in line 90 of the program (M1 is the low byte = 45H = 69 decimal, M2 is the high byte = 69H = 105 decimal). These addresses for other DOS's can be found in "Basic Faster and Better" page 273. (For TRSDOS 2.3 M1=35 and M2=105). One can also set M1 and M2 to point to a 256 byte area in high memory protected by answering the Memory Size question. The other feature exclusive to NEWDOS80 V.2 is the CMD"O" sort function in line 370. Delete this line for other DOS's.

I won't take up the space here to duplicate the information in the 80 Micro article about the operation of the machine language program. I recommend that you read this article if you are interested. I have added some enhancements to the program. First, I have used the Basic command MID\$(RT\$,I,1) in Subroutine 700 to modify the machine language program that is contained in the string RT\$ for loading registers, etc. This is faster and requires less redefining of strings (which eventually leads to delays for "garbage collection") than the method used in the article. I also added several lines to the USR routine to allow the DOS error codes to be returned in the variable X in line 630. Line 650 allows DOS error 6 to be passed since we want to read a system file. Lines 320 and 338 have been included to separate out the file name from the extension so that the names will look like "FILE/CMD" rather than "FILE CMD" as they are stored in DIR/SYS. I also added routines to calculate the free space from the GAT sector (line 250) and the disk name (line 260). The current program is for a two granule directory, but it could easily be modified for more granules by changing the FOR...NEXT loop limits in line 280.

This program works well for NEWDOS80 V.2 format disks and it takes about 13 seconds to transfer the file names to the string variables. However, before incorporating this in the DIRPROG, I found that there is a problem with using this program with other format disks from TRSDOS and DBLDOS. With these disks the error code 24 (File



JUNE 82

not in directory) is returned. In other words, the directory can not find itself. It seems like DOS uses some other method of locating the directory such as looking for read protected sectors or using the third byte of the BOOT sector. The hash code for DIR/BYB in the HIT sector (2C) is not correct in TRSDOS and DBLDOS since it should be C4 as in NEWDOS86 V.2. SUPERIAPing C4 into the TRSDOS HIT table for DIR/SYS allows the directory to find itself. I am now trying to figure out how the DOS DIR command finds the directory without the HIT sector information. Does anyone know how this works? I am going to start by disassembling the NEWDOS86 V.2 DIR 200 code.

This program may not be of any use to anyone, but an understanding of the methods of accessing DOS calls through Basic is very useful. I think that projects like this are a great way to learn how to program.

Mike McBenry  
MCHENRY @ SBUG-86

P.S. This program will be on SBUG-86 for down loading.

```
-----
10 'PROGRAM NAME = RDDIRSYS/BAS
20 'BY MIKE MCBENRY -- MAY 29, 1982
30 'PROGRAM TO READ A DISK DIRECTORY FROM BASIC
40 'UTILIZING DOS I/O ROUTINES -- ADAPTED FROM B. B. FINK
50 ' 86 MICROCOMPUTING APRIL 1982 PAGE 210
60 CLEAR 5000
70 DEFINT A-Z
80 DIM RT(25),PR$(64)
90 M1=69:M2=105 ' MEMORY LOCATION (69458) FOR NEWDOS86V.2 THIRD DISK FILE
SUFFER -- SEE "FASTER AND BETTER" PAGE 273 FOR OTHER DOS SYSTEMS OR RESERVE 256
BYTES IN HIGH MEMORY
100 DC$=STRING$(32,32) 'SET UP FCB CONTROL BLOCK IN STRING
110 LR=0 'LOGICAL RECORD LENGTH =256
120 UR$="" 'STRING TO RECEIVE SUFFER INFORMATION
130 VP=VARPTR(UR$):POKEVP,255:POKEVP+1,M1:POKEVP+2,M2:RT(3)=M1:RT(4)=M2 ' POINT
UR$ AT BUFFER AND MAKE 255 BYTES LONG
140 FOR I=1 TO 22:READRT(I):NEXT ' LOAD M/L ROUTINE INTO RT ARRAY
150 DATA 217,33,0,0,6,0,14,0,22,0,30,0,205,0,0,217,30,0,111,195,154,10
155 RT$=STRING$(22," "):FOR I=1 TO 22:GOSUB700:NEXTI
160 '
170 DR=1:DR$="1" ' DRIVE NUMBER 1 -- CHANGE IF NECESSARY
180 CLS
190 K=1
200 FL$="DIR/SYS"
210 FL$=FL$+" "+DR$+CHR$(13):MID$(DC$,1,LEN(FL$))=FL$
220 GOBUB 400:GOBUB 500 ' OPEN FILE
230 'READ RN=0 (GAT SECTOR) AND DETERMINE FREE SPACE
240 RN=0:GOSUB400:GOSUB500:GOSUB500:GOSUB500
250 NG=0:FOR I=1 TO 96:GA=ASC(MID$(UR$,I,1))
:IFGA=255NEXTELSIFGA=252NG=NG+2:NEXTELSENG=NG+1:NEXT
260 DN$=MID$(UR$,209,8) ' DIBX NAME
270 PRINT0,"FREE GRANS= ",NG,"DIBX NAME= ",DN$
280 FOR RN=2 TO 9
290 GOSUB 400:GOSUB500
300 GOSUB 500:GOSUB500
310 FOR J=6 TO 240 STEP 32:IF ASC(MID$(UR$,J-5,1))<>16THEN350ELSE
PR$(K)=MID$(UR$,J,11)+" "
320 FL=INSTR(1,PR$(K)," "):IFMID$(PR$(K),9,1)=-"
```

# South Bay TMS-88 Daere Group

```

"THEN340ELSEIF(F1>9ORF1=0)THENF1=9
330 MID$(PR$(K),F1,13-F1)="/" +MID$(PR$(K),9,3)+STRING$(9-F1,32)
340 K=K+1
350 NEXT J
360 NEXT RN ' READ THE VISIBLE FILES FROM THE DIRECTORY SECTORS AND FORMAT INTO
THE ARRAY PR$
370 CMD"O",K-1,PE$(0)' SORT THE FILE NAMES (NEWDOS88V.2 ONLY)
380 FOR I=1 TO E-1:PRINT PR$(I);" " "NEXT ' PRINT THE FILES
390 GOSUB420' CLOSE THE FILE
400 PRINT:INPUT"PRESS (ENTER) TO CONTINUE ";Z
410 GOTO170
420 'CLOSE FILE
430 GOSUB 510 :GOSUB 590 : RETURN
440 '
450 'DISK I/O ROUTINES -LOAD JUMP VECTORS
460 RT(6)=LR:RT(8)=DR:I=6:GOSUB700:I=8:GOSUB700:'LOAD LRL &DRIVE #
470 GOSUB 530 : GOSUB 550 : RT(14)=36:RT(15)=68:I=14:GOSUB700:I=15:GOSUB700:
RETURN :'OPEN FILS
480 RT(6)=INT(RN/256): RT(8)=RN-RT(6)*256 :I=6:GOSUB700:I=8:GOSUB700'LOAD
RECORD NUMBER
490 GOSUB 530 :RT(14)=66: RT(15)=68 :I=14:GOSUB700:I=15:GOSUB700:RETURN
'POSITION FILE
500 GOSUB 530 :RT(14)=54: RT(15)=68 : I=14:GOSUB700:I=15:GOSUB700:RETURN 'READ
LOGICAL RECORD
510 GOSUB 530 :RT(14)=40:RT(15)=68:I=14:GOSUB700:I=15:GOSUB700: RETURN 'CLOSE
FILE
520 '
530 'LOAD DCB ADDRESS(INTO DS REGISTERS)
540 RT(10)=PSEE(VARPTR(DC$)+2):RT(12)=PSEE(VARPTR(DC$)+1)
:I=10:GOSUB700:I=12:GOSUB700:RETURN
550 'LOAD BDFFER ADDRESS (INTO SL REGISTERS)
560 RT(3)=M1 :RT(4)=M2 :I=3:GOSUB700:I=4:GOSUB700:RETURN
570 'LOAD DSR RECORD ADDRESS (EL REGISTERS)
580 '
590 'CALL DISK ROUTINES
610 M1=PEEK(VARPTR(RT$)+2)*256+PEEK(VARPTR(RT$)+1)
620 IF M1>32767 THEN M1=M1-65536
630 DEFDSR1=M1 :X=DSR1(0)
640 IF (X=5 OR X=6) THEN 650 ELSE PRINT"DISK I/O ERROR NO. ";X:GOTO400
650 RETURN
700 MID$(RT$,I,1)=CHR$(RT(I)):RETURN

```

## FIND YOUR PROGRAM

When you have gone to double density, the directory you search to find a program can sometimes be very cluttered. If you are tired, you can even miss the entry completely. It helps to use the selective /XXK option on the directory of NEWDOS 88, such as DIR /CMD or DIR /SYS, but that doesn't help you if you are looking to see if you have a program in both source (/SOR) and executable (/CMD) form or if you have /LST /REL and /FOR files of the same program.

An aid to help with this problem is the program documented here. It allows you to do a DIR command and then type SEARCH. For instance, DIR 1 (ENTER), SEARCH -space- P (ENTER), would find all programs in the directory starting with P.

JUNE 82

The limitations on the use of this program are that, if the directory is too large and practically fills the screen, it may scroll up before it has been searched for you. If that is the case, perhaps you need to use a /XXX when you do your initial DIR command to limit the size of the presentation. You will only lose the top line of the directory in any case.

When using the program, you will be left with a directory which has all but the entries beginning with the letter you specified blanked out. If you get tired of typing "SEARCH", you can save the program as "S/CMD" and only need to type "S" then to use it.

This program only works for a DOS which lists 4 across as does NEWDOS86 V2. If you wish to modify it for another DOS, you can by altering the offset added in the COUNT subroutine and by changing the end of line correction value in the CORR subroutine.

I am providing the program to the Disk Librarian and it should also be available on the hullating board.

Ian Wehh

```

00100 ;*****
00110 ; ----- SEARCH/CMD -----
00120 ;
00130 ; IAN A WEBB, SARATOGA, CA 6/6/82
00140 ;
00150 ;*****
F000 00160 START EQU #F000S ;STARTING LOCATION -
00170 ;CHANGE TO SDIT YOURSELF
402D 00180 DOS EQU 402DS ;DOS RETURN ADDRESS
F000 00190 ORG START
F000 3100F0 00200 LD SP,START ;SET STACK AREA
F003 7E 00210 LD A,(SL) ;GET LETTER FOR COMPARE
F004 F5 00220 PUSH AF ;SAVS LETTER
F005 3A0E3C 00230 LD A,(3C0EH) ;GST VIDEO TOP LINE TEST
F006 FE20 00240 CP ' ' ;SLANK?
F00A 2000 00250 JR Z,NOTREG ;NOT REGULAR DICTIONARY
F00C 21003C 00260 LD SL,3C00S ;3RD LINE LOCATION
F00F 2277F0 00270 LD (VIDSO),SL ;PUT INTO MEMORY
F012 1015 00280 JR BEGIN ;GO TO START NOW
F014 3A0F3C 00290 NOTREG: LD A,(3C0FH) ;GET NEXT VIDEO POSITION
F017 FE20 00300 CP ' ' ;SLANK?
F019 2000 00310 JR NZ,TOP ;SCREEN MOVED ALL DP TOP
F01B 21403C 00320 LD SL,3C40S ;SECOND LINE ADDRESS
F01E 2277F0 00330 LD (VIDEO),HL ;PUT IN VIDEO PTR
F021 1006 00340 JR BEGIN ;GO TO BEGINNING
F023 21003C 00350 TOP: LD SL,3C00S ;FIRST VIDEO LOCATION
F026 2277F0 00360 LD (VIDEO),SL ;SAVE IN VIDEO PTR
F029 C1 00370 HHGIN: POP SC ;GET COMPARE LTR INTO S
F02A 1604 00380 LD D,4D ;COUNTER
F02C 2A77F0 00390 LD SL,(VIDEO) ;SCR PTR TO VIDEO LOC.
F02F 85 00400 PUSH SL ;SAVH LOCATION
00410 ;*****
00420 ; REGISTERS DSED:
00430 ; HL -- SCREEN VIDEO PTR
00440 ; A -- TEMPORARY
00450 ; S -- SODS VALUH INPDT IN PROGRAM BODY
00460 ;

```

# South Bay TBS-88 Users Group

```

00470 ;*****
P030 7E 00480 TEET: LD A,(EL) ;GET FIRST LETTER ON SCR
P031 FE20 00490 CP ' ' ;A ELANK?
P033 CA02F0 00500 JP Z,FINIS ;YUP, FINISB UP THEN
P030 E8 00510 GO: CF B ;LETTER SAME AS SORT LTR?
P037 C43FF0 00520 CALL NZ,NOKEEP ;YEE, BETTER SAVB IT
P03A CD50F0 00530 CALL COUNT ;POINT TO NEXT SCREEN POS
P03D 18F1 00540 JR TEET ;DO IT AGAIN
00550 ;*****
00560 ;
00570 ; REGISTERE UEBD:
00580 ;
00590 ; BL -- BOUBCB ADDRESSES
00590 ; DE -- DEETINATION ADDRESS
00600 ; BC -- 12D - LENGTH OF ENTRY
00610 ;
00620 ;*****
P03F D5 00630 NOKEEP: PUEB DB ;SAVE D COUNTBR VALUE
P040 C5 00640 PUSE EC ;EAVE
P041 E5 00650 PUSE EL ;SAVE VIDEO PTR
P042 E5 00660 PUBB BL ;AGAIN
P043 D1 00670 POP DE ;VIDEO DESTINATION
P044 216BF0 00680 LD EL,ELANKS ;POINT TO BLANKS
P047 018C00 00690 LD EC,12D ;LENGTH OF ENTRY
P04A EDE0 00700 LDIR ;MOVE ELANKE TO COVER
P04C E1 00710 POP EL ;GET EACE VIDEO PTR
P04D C1 00720 POP BC ;RESTORE BC
P04E D1 00730 POP DE ;RESTORB DE
P04F C9 00740 RET
00750 ;*****
00760 ; ROUTINE TO COUNT DIRECTORY ENTRIBE WITH
00770 ; NEWDOE 80 V2 (4 ACROSE ECREEN)
00780 ; REGISTERE USED:
00790 ; EL -- POINTER TO SCREEN
00800 ; D -- COUNTBR (MUBT BE SET TO 04D IN CALLING PGM)
00810 ; EC -- TO ADD OFFSET
00820 ; A
00830 ; REGISTERS CHANGED:
00840 ; HL, A, D
00850 ;*****
P050 C5 00860 COUNT: PUSE BC ;EAVE EC
P051 010F00 00870 LD BC,0FB ;OFFSET TO ADD
P054 15 00880 DBC D ;CTR TO CORRECT END LINE
P055 CC5BF0 00890 CALL Z,CORR ;AT END NOW - CORRECT CT.
P050 09 00900 ADD EL,EC ;ADD OFFSET
P059 C1 00910 POP EC ;GET BACK COUNTER
P05A C9 00920 RET
P05B 7D 00930 CORR: LD A,L ;VALUE TO FIX
P05C C004 00940 ADD A,04E ;ADD VALUE FOR END LINE
P05E 0F 00950 LD L,A ;PUT IN HL
P05F 1004 00960 LD D,04D ;REEET PTR
P001 C9 00970 RET
P002 21403F 00980 FINIE: LD EL,3F40E ;NEXT TO BOTTOM LINE
P065 222040 00990 LD (0020E),EL ;PUT IN FOR CURSOR LOC
P068 C32D40 01000 JP DOS
P00E 20 01010 BLANKS DEFM ' ;ELANKE TO WIPEOUT ENTRY
P077 0000 01020 VIDEO DBFW 00 ;STORAGE FOR VIDEO PTR
P000 01030 END BTART

```

JUNE 82

FOR SALE

Parcom Data Separator as new. Fix those locked out track errors. Easily plugs into the Model I expansion interface. (original price \$25) \$15. ----- Programma Graphics high resolution graphics board with all software. Fits inside keyboard of Model I. Allows you to define your own character set, produce inverse video characters, etc. Has never been sold here in. (original price \$150) \$65. ----- Radio Shack Computer desk - has upper shelf which is removable. (See 26-1307 in catalog for \$65.) \$40. ----- JPC high speed tape adaptor, TC-8. "Poor man's floppy." Really works great. Allows files, search for program, etc. Has switch built in to switch from regular cassette to high speed unit. (See current magazine ads - \$90.) \$60. --- Would talk about trades on above - what do you have to offer?

Ian Webb - (408) 867-9533

NOTICE TO AMATEUR RADIO OPERATORS

Since there are a number of Amateur Radio operators who belong to SBUG, this article will summarize the activity on the Amateur Radio Networks, as well as a project from Radio Nederland. While an Amateur Radio license is necessary to participate in the Amateur Radio Networks, those without a license, but who DO HAVE a receiver capable of listening to the Amateur Bands, and/or the Shortwave bands can use this information.

A "net" on the Amateur Radio bands, is simply a group of people with common interest, getting together at a specific time, sort of HBUG Ham Radio Style! There are a number of nets for the various home computers, but I'll cover those for the TRS-80. On Sunday morning, at 11:00 AM (local time), the TRS-80 Net - West Coast Session, meets on 14.342 MHz, with Bill Myatt, WA6YKH, as net control station. Bill lives in Tustin, and belongs to OCTUG, but propagation usually allows us to hear him in the Bay Area. Check-ins will come from all over the United States. Around 2:00 PM, the net control shifts from Bill, to a station in New England; N1ACH. The Net usually ends around 4 or 5 PM. This is an excellent place to ask questions on any TRS-80.

While the popular unit on the net is the Model I, there are more people checking in each day with the Model III, and the color computer. I try to check-in (or at least listen) each week, and find that the topics usually range from the most simple, to the very difficult. Both software and hardware are discussed. One nice point is that each net begins with a period to answer help from those with technical problems. So the next time your TRS-80 goes "helly up", here is a chance to ask for help.

Here in the Bay Area, we have a general computer net that meets on 2 Meters. Check 145.21 MHz, every Wednesday night, at 9:00 PM. The repeater is located near Livermore. This is an information net that welcomes check-ins from anyone with a home computer. The few times I have listened to this net, I found many Model III's, and Color Computers. Again, the subjects range from software to hardware, and

**South Bay TRS-80 Users Group**

no question is ignored.

There are other computer nets on the air, and I'll be happy to answer any questions. Drop me a note to the addresss listed in the SBUG Roster, or give me a phone call.

Another area that I found to be getting a great deal of interest in Europe, is sending programs to listeners via the regular FM radio stations. I first learned of this while listening to Radio Nederland's program "Media Network". This program is mainly devoted to DX'ing on the Shortwave bands, but about every other week, they cover a subject related to home computers. If you want to get more information on their "Reperato" language developed as a common language for ALL microcomputers, or just see what they have to say, listen in on Thursday nights, at 18:50 PM, yes that is 18:50, on 9.715 MHz and 6.165 MHz. The program lasts for 30 minutes, and at this time of the year, I find that 6.165 MHz is the best frequency to hear.

If I learn of other TRS-80 nets, or I get more information from Radio Nederland that all of the members of SBUG might enjoy, I'll send them along to the newsletter.

Ross W. Forbes, WB6GFJ

**LETTER TO APPARAT CONCERNING WINCHESTER HARD DISC**

28-May-1982

APPARAT

4401 S. Tamarec Pkwy.  
Denver, CO. 80237

Mike Wade/Jim Leulette:

Enclosed is the controller board which I discussed with Jim. The winchester (e.g. Seagate ST506) can be mounted on top of the board, and the 2 short cables enclosed connect it's 26 & 34 pin card edge to the controller. To connect to the standard Radio Shack 4 drive cable, possibly a 34 pin (female) header could be clamped on near the end of the Radio Shack cable. Both the 34 and 50 pin (male) header connectors on the controller card are always enabled, so you can treat the drive as an 8" even though you connect to the Radio Shack 34 conductor cable!

Note the configuration jumper, on the board and in the doc. The top of the doc sheet corresponds to the outermost (toward edge of board) jumper. The board is set up as 5" 2 drives (single sided (note the differences between Radio Shack's use of DS4 & side select!) and probably should be initially tried as :1 and :2 (no :3 drive). Feel free to experiment, but beware RS's pin 6/32/34 confusion and any similar wiring changes in the R.S.'s drives themselves!

Apparently, the NEWDOS88 changes need to be in the area of allowing more sectors per track, and not giving the "drive too slow" error when formatting discovers the 5" option on our controller simulates

JUNE 82

180 RPM. (This would be difficult for us to change at the moment, unfortunately). Eight inch is fine: 360 RPM simulated. CP/M doesn't care about the rate of index pulse; TRS-80 was the first DOS that complained!

Regarding sectors per track, the ST586 holds 10,416 bytes per track unformatted double density (5288 single density); the SA400 seems to hold about 3200 single density unformatted. I estimated 28-32 sectors (\*256 bytes) per track double density.

Regarding the number of tracks (actually viewed from the host as simply step pulses relative to track 0), 2 drives single sided option on our controller allows 386; 2 drives double sided allows 153; 1 drive 1 side allows 612. There may be a 255 limit in the 1771 chip.

We hope you will be as excited about the possibilities of this (on other computers too) as we are, and that you will have a chance to develop patches to NEWDOS80 promptly. A number of TRS-80 owners intend to purchase if their standard system (possibly including a 'doubler') can support it. (We demo'ed it using ea 8" e OMIKRON MAPPER II; OMIKRON CP/M even booted without the Mapper 2 using 5" drive 0 jumper options on our board!)

This board is priced at \$295 and is loaned to you until June 14, 1982.

The contact for all marketing/pricing info is:  
Joe Wright 408-297-5583 day or night

For info regarding our TRS-80 experiments, contact myself at 408-738-2888 x4474 days or 415-726-3487 nights.

Thank you very much for your time and consideration.

Ron Carpenter  
RON @ SBUG-80

South Bay TRS-80 Users Group  
P.O. Box 60116  
Sunnyvale, Ca 94088

FIRST CLASS MAIL